The Voice

Volume 63
Issue 1 *Fall 2017*

Article 7

Cadaver Lab Provides New Opportunities

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Faculty Notes

Theology Professor **Dr. Justin Bailey's** article "The Body in Cyberspace: Jaron Lanier, Merleau-Ponty, and the Norms of Embodiment" was recently selected for the Charles J. Miller award for Volume 45 of *Christian Scholar's Review (CSR)*. The Charles J. Miller award highlights one article per year that "best achieves the goals of Christian scholarship set by the mission statement of *CSR*."

Chemistry Post-Doctoral Fellow **Dr. Joshua Zhu** coauthored the research paper "Cation Exchange Assisted Binding-Elution Strategy for Enzymatic Synthesis of Human Milk Oligosaccharides (HMOs)," which was recently published in *Bioorganic and Medicinal Chemistry Letters*.

In June, two engineering faculty members presented at the 2017 Christian Engineering Conference in Cedarville, Ohio. Engineering Professor **Dr. Ethan Brue** authored and presented a paper titled "The Craft of Storytelling in Engineering Education," and Engineering Professor **Dr. Kevin Timmer** presented a paper titled "Shalom Seeking: Foundations of Flourishing."

Education Professor **Dr. Kathleen VanTol** and Instructor of Language Arts **Rikki Heldt** received research funds to attend a Council for Christian Colleges and Universities conference in Costa Rica during the summer of 2017 to learn about how to support first generation Latino students on college campuses.

Theology Professor **Dr. David Henreckson** was elected vice president of the Fellowship for Protestant Ethics for the 2017-18 term. He has also been invited to serve as a contributing editor to *Comment*. His essay "Not Trained by Angels" was also published in the fall 2017 issue of *Comment*.

JONATHAN FICTORIE ('20)

Dr. Tony Jelsma says that Dordt's cadaver lab will allow students to better understand and retain the information they learn about human anatomy.

CADAVER LAB PROVIDES NEW OPPORTUNITIES

A week before the fall semester began, Biology Professor Dr. Tony Jelsma and eight Dordt seniors donned scrubs and white lab coats and entered Dordt's new cadaver lab.

For five days under Jelsma's direction, the students spent eight hours per day dissecting a male and a female body as part of a weeklong intensive cadaver course.

"At the end of the first day on Monday, we were exhausted," says Jelsma. "The work is quite detailed, and you realize that this is a human being, which emotionally can be hard."

All eight students who participated in the cadaver lab had taken Jelsma's anatomy class, so they were well-versed in human anatomy. However, Jelsma believes having access to a cadaver course and lab will help anatomy students better understand and retain the information they've learned.

"In the past, anatomy students have dissected cats; they have had photographic atlases in their textbooks that show pictures of human bodies," says Jelsma. "But that's not the same as looking at a human body."

Julia Bos, a senior biology major who participated in the cadaver course, agrees. "It's a better way to learn than by looking at a diagram in a textbook," says Bos. "These are real muscles that you are revealing, for example. It was such a different experience to see it in a real body in 3D. I feel like I can remember it so much better now—the different muscles and their positions."

Students who plan to attend medical or physical therapy school will especially benefit from taking a course in the cadaver lab.

> "Usually, we learn the different organ systems in isolation from each other. Now I'm planning to teach regionally rather than system by system."
>
> — Dr. Tony Jelsma, biology professor

"Bigger universities typically have cadaver labs, but I don't know how much access an undergraduate student would have to a cadaver lab at a large university," says Jelsma. "So when students go on to medical school or physical therapy school, they will have knowledge that will make them that much better prepared."

The cadaver lab is smaller than a classroom, with room for two dissecting tables and a storage closet.

"We would usually not have more than four students on one body," says Bos. "Any more than that would get crowded."

A monitor on the wall, attached to a camera on a moveable arm, allows Jelsma and the students to project muscles, veins, and arteries. The bright surgery lights let students see minute details of the dissection.

"The fascia and the tendons are actually iridescent under the lighting," says Bos. "It was amazing to see the variety of tissues, how everything looks so differently—and it's all designed for specific functions."

The cadaver lab was designed to preserve and respect the bodies.

"There's a separate ventilation system in the cadaver lab, and each table has its own ventilation," says Jelsma. "We also have three levels of security: The tables themselves are locked with a padlock, the door to the lab is locked, and the door to the anatomy lab is locked. This level of security is to show respect for the human body."

It will take much longer than forty hours to dissect the two cadavers; the students in the cadaver lab mainly worked on revealing the muscles and opening up the chest cavity. Later this fall, Jelsma's anatomy course will slowly finish the dissection; students taking non-major human biology courses in the fall and spring will observe the dissected cadavers.

Now that he has access to the new lab, Jelsma is rethinking the way he teaches his courses.

"We usually learn the different organ systems in isolation from each other," says Jelsma. "However, as you're dissecting, you have to watch out for this blood vessel or identify this nerve or muscle. You see how tightly held together the person is; everything is integrated. Now I'm planning to teach regionally rather than system by system."

Dissecting and studying cadavers has reminded Bos of God's love for his creation. "It shows how much detail God put into designing the human body," reflects Bos. "It is a picture of his love for us. It is a labor of love to make the body that detailed and well-designed when God could have made our bodies simpler."

"I'm really grateful to the donors who gave us the funds to complete the Science Building renovations," says Jelsma. "We were doing good things before, but we can do so many more good things now."

SARAH MOSS ('10)

The cadaver lab is one of many upgrades in the recently completed Science Building renovation. The Science Building now houses a computational chemistry lab, the hallways have been widened, and a skywalk connects the Science Building to the Campus Center.

Faculty Notes

Dordt's mathematics faculty took part in the Association of Christians in the Mathematical Sciences conference in Charleston, South Carolina. **Dr. Tom Clark** co-presented "Math Teacher Circles: How and Why to Start Yours," highlighting some of the work he has done with the Northwest Iowa Math Teachers' Circle at Dordt College. **Dr. Valorie Zonnefeld** and Education Professor **Dr. Ryan Zonnefeld** co-presented "A Framework for Integrating Faith and Learning in the K-12 Mathematics Classroom." **Dr. Mike Janssen** also presented at the biennial meeting of the conference.

History Professor **Dr. Mark McCarthy** took three Dordt students to Ukraine from May 22 until June 3. The purpose of the trip was to give the students a better sense of the culture that produced the mental health data they were examining.

Chemistry Professor **Dr. Channon Visscher** co-authored the article "Retrieval of Atmospheric Properties of Cloudy L Dwarfs," which was published in the *Monthly Notices of the Royal Astronomical Society*. He also presented an invited talk titled "Chemistry of Impact-Generated Disks: Implications for the Moon" at the Goldschmidt 2017 conference held in Paris, France.

In August, Education Professor **Dr. David Mulder** presented a professional development workshop for the teachers at Western Christian High School titled "Using Data for Classroom Decision-Making." The session examined different types of data teachers might use. It also explored different ways of collecting information about what students know, understand, and are able to do. They also examined strategies for providing feedback to students to help them grow.